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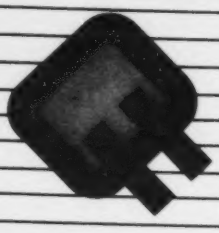

Economics & Forecasts Division

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LONG-TERM ECONOMIC OUTLOOK

ANNUAL REVIEW

September 1990

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This Review replaces the September 1989 Long-Term Economic Outlook. The forecasts contained in it have been approved by the Vice-President, Corporate Planning. They have the status of Corporate Predictions as defined under Section 7 of the OOOH Manual.

Contributors: P.S. Spiro, M. Angastiniotis, D. Gustafson, R. Hogue, and C. De Borja (stenographer).

Please direct any questions to
Mitchell P. Rothman (6375) or Peter S. Spiro (6389).
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File No.: 706.01A

ontario hydro

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October 18, 1990

File No.: 706.01 (#281)

To: External Users of the Ontario Hydro Economic Outlook

Re: Economic Outlook

Please find attached the Annual Review of Ontario Hydro's Economic Outlook. This consists of a Long-Term Outlook covering a 25 year time horizon, and a Short-Term Outlook covering a 5 year time horizon. The latter was finalized before the full impact of the mid-East crisis was appreciated. The eventual outcome of that situation, and the duration of high oil prices, remains very uncertain. A best guess at this point is that the loss in consumer confidence and disposable income from the sharp increase in oil prices will cause 1990-91 real GDP growth to be lower by at least 0.5 to 1 percent than we expected at the time the report was printed. Unfortunately, this aggravated economic slowdown would be unlikely to cause interest rates to be lower than previously expected. It appears that central banks will be maintaining relatively high interest rates to help ensure that the inflationary consequences of the oil price rise are not as prolonged as they were in the 1970s.

The forecasts contained in the Economic Outlook report are important planning variables for Ontario Hydro, both in short-term financial planning and long-term generation planning. The long-term and Ontario-specific forecasts presented in the Economic Outlook are originated within Ontario Hydro. Ontario Hydro's planning horizon is among the longest of any company or government agency in Canada, and therefore we devote special attention to the factors which will influence long-term trends.

If you wish to receive this report again next year, please fill in and return the coupon below.

Yours truly,

Peter S. Spiro
Section Head - Economic Forecasts
Economics and Forecasts Division

Return to: Mrs. Cecilia De Borja, 700 University Avenue H5 C27, Toronto M5G 1X6.

------- PLEASE SEND ME THE 1991 UPDATE OF ONTARIO HYDRO'S ECONOMIC OUTLOOK -------

NAME AND ADDRESS: _____

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(Or attach current mailing label)

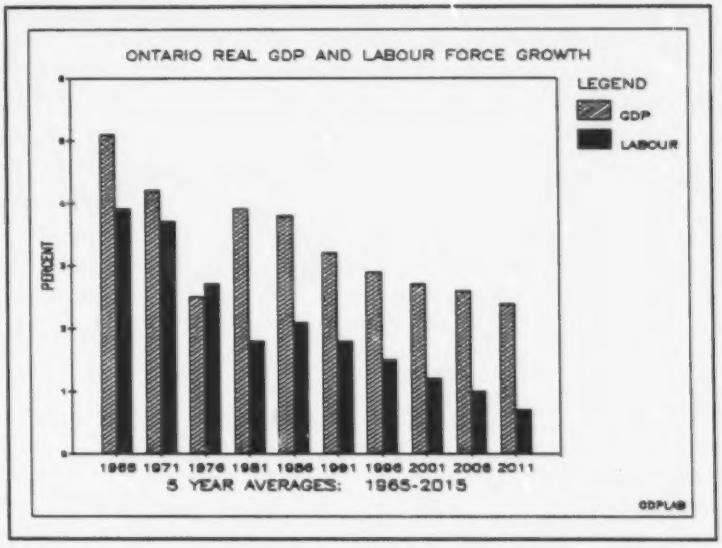
September 1990

1. Sources of Ontario Economic Growth

	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015
Employment growth*	1.5	2.7	2.0	1.6	1.2	1.0	0.7
Real output per worker*	2.2	1.3	1.2	1.3	1.5	1.6	1.7
Total output growth (GDP)*	3.9	3.8	3.2	2.9	2.7	2.6	2.4

* Average annual percent change.

Growth in GDP (the total output of all goods and services produced) occurs because of growth in the supply of factors of production (the labour force and the stock of physical capital) and because of improvements in productivity. Productivity growth is mainly due to technological improvements and increases in the educational and skill level of the population. In the short term, productivity can be adversely affected by supply shocks and monetary disturbances, as was seen in the 1970s. In the 1970s productivity growth was near zero, mainly due to oil price shocks and high inflation and unemployment, but more normal productivity growth resumed in the 1980s. Future improvements in productivity are likely to average about 1.5 percent per year, in the absence of major supply shocks. There would be a slight tendency for the rate of labour productivity to increase as the slower growth of the work force will cause more advanced, automated production to be used. As a result of slow labour force growth, aggregate output in the economy is forecast to grow slowly compared to historical rates, but the growth in productivity would produce a substantial growth in per capita real incomes.



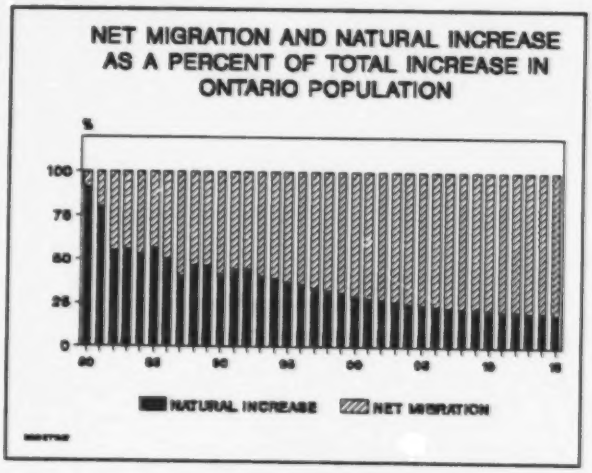
2. Ontario Labour Force and Population

The future birth rate has relatively little direct impact on the rate of economic growth or the demand for electricity. It is the increase in the working age population, earning and spending its income, which is important for Hydro's planning. The low birth rates of the past twenty years mean that the increase in the work force in the next twenty years will remain relatively low. The birth rate has declined dramatically over the past two decades, to an average rate of about 1.7 children per woman

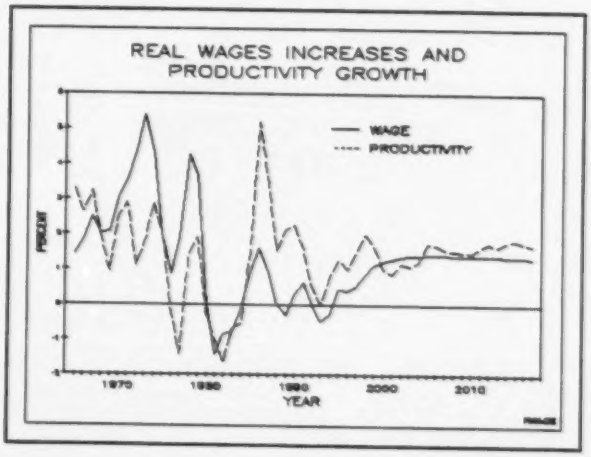
during her lifetime. The sociological factors which have contributed to this low birth rate are expected to maintain a continued low birth rate. However, even if an unforeseen large increase in the birth rate suddenly occurred, it would have no direct impact on the size of the work force for about twenty years.

In addition to the natural increase in the size of the working age population, the growth in the total labour force is influenced by the number of immigrants into Ontario and the proportion of the population which chooses to work. Both of these factors are likely to contribute to some increased growth. As the overall population ages, the proportion of women who are in the work force (currently about 61 percent) is expected to rise to about 70 percent.

In the next two decades international migration into Ontario is expected to be substantially higher, averaging about 100,000 per year compared to about 70,000 per year in the previous three decades. In the 1970s and 1980s the labour force was rising rapidly as a result of the high birth rates of the 1950s and 1960s. This contributed to high unemployment rates which created opposition to immigration. In the next twenty years, by contrast, the low natural growth rate of the labour force will create low unemployment rates and a strong demand for unskilled service workers to serve an older population. The rate of natural increase (births minus deaths) will decline rapidly as Ontario's population ages. As the chart at right shows, immigrants already account for about half the annual growth rate in Ontario's population. Based on current birth rates, the population of Ontario would start to decline around the year 2025 in the absence of immigration.



The increase in the immigration rates and women's participation rates is unlikely to be sufficient to offset the low birth rates of the past twenty years. Combining all the factors mentioned here leads to an expected labour force increase of about 1.2 percent per year in the 1991 to 2015 period, compared to a growth rate of 2.8 percent per year in the 1966 to 1990 period. This lower labour force growth is also expected to contribute to higher growth in real wages. High unemployment caused wages to lag behind the rate of inflation for much of the 1980s, as seen in the chart. In periods of full employment, the increase in the annual real wage rate (averaged over several years) is about equal to the rate of productivity growth in the economy, and this assumption is incorporated in the



long-term Outlook. Therefore real wage costs will rise about 1.5 percent per year over the forecast horizon, compared to about zero in the 1980s.

3. Sectoral Distribution of Output

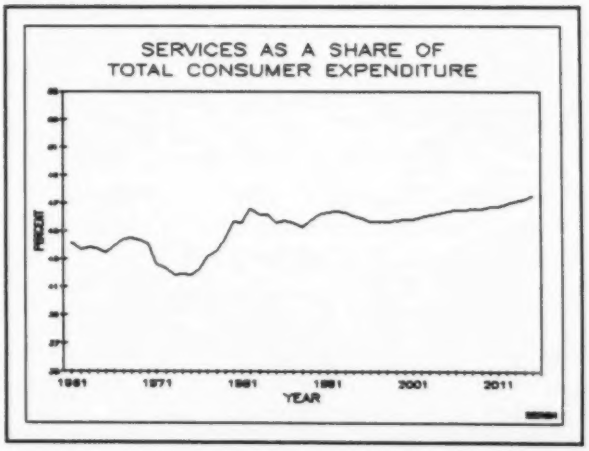
	1970	1980	1985	1990	1995	2000	2005	2015
Primary Sector*	6.7	4.7	4.3	3.5	3.4	3.1	2.9	2.8
Manufacturing Sector*	26.9	25.7	27.4	25.5	26.3	26.4	26.2	25.4
Service Sector*	50.1	54.3	53.7	56.5	56.5	57.0	57.8	59.1

* Percentage share of provincial GDP (eg, the importance of these sectors as direct sources of income for Ontarians)

The composition of GDP growth is important for predicting the growth in demand for electricity, because some industries and sectors are considerably more electricity-intensive than others (meaning that electricity represents a relatively larger share of the total cost of that industry's production).

The most pronounced change in industrial structure over the last few decades has been a sharp decline in the share of primary industry (mining, agriculture, logging) in Ontario's GDP, and a corresponding increase in the share of the service sector. These trends are expected to continue, but at a slightly slower rate. The gradual depletion of natural resources and competition from developing countries implies a continued decline in the relative importance of the primary sector in Ontario's future. As typically measured, services (excluding government administration) now account for about 50 percent of Ontario's GDP. However, much of this is not personal services but rather services to other businesses. It has been estimated that when services whose existence is dependent on manufacturing are included, manufacturing accounts for roughly 50 percent of GDP, and it is clear that continued growth in standards of living depends on the maintenance of a strong manufacturing sector in Ontario. Technological trends favour the continued growth of independent companies providing such services as computing and communications to manufacturing companies.

A detailed study of the impacts of the Goods and Services Tax has been completed recently, and the results are reflected in this outlook. In the long run, the GST contributes to higher capital investment expenditure, and therefore a slightly higher level of real GDP. The GST is not likely to have a major impact on spending patterns in the economy, but it will cause consumer spending on services to grow a little more slowly than otherwise in the 1990s. The GST will initially hurt consumer service providers such as restaurants, but the likely impact, shown in the chart at the right, is not large relative to historical fluctuations.



In the long run, the service sector is expected to grow slightly faster than the manufacturing and primary sectors, as a result of technological factors which favor information related activities.

It is felt that Ontario's proximity to markets, educated labour force, and well-developed infrastructure should enable this province to meet the challenges created by the Free Trade Agreement. Some individual companies will inevitably suffer as a result of the restructuring needed to meet new competition, but Ontario's largest industries are expected to be quite cost-competitive, and the economy will tend to specialize more in the industries in which it is already strong.

4. Inflation - Consumer Price Index*

1981 - 1985	7.6%	2001 - 2005	5.0%
1986 - 1990	5.0%	2006 - 2010	5.0%
1991 - 1995	5.1%	2011 - 2015	5.0%
1996 - 2000	5.0%		

* Average annual percent change for Ontario

Inflation is a particularly uncertain variable, because its long-run value is the result of government policies, rather than fundamental economic forces. The long-term forecast of inflation is a political forecast, which relies on our conjectures of how the economic factors prevailing in the future will influence government policy. Nevertheless, this forecast is of much more than academic interest, since the future rate of inflation will have an important bearing on the real costs of contracts entered into today, and especially on the real interest rates on current long-term borrowing. Inflation also has a substantial effect on the overall efficiency of the economy. It has been found that inflationary policies give a short-term boost to GDP growth, but lead to lower long-term growth because inflation contributes to economic instability and makes investments riskier.

For Canada, the long-term inflationary outlook has become particularly cloudy. First, there is the prospect of the GST, and a risk that it will have a longer-lasting inflationary impact than the government is predicting. This risk occurs partly because the GST's 7 percent starting rate will probably have to be raised in the coming years to cope with the federal government's deficit. Taxes of this type in Europe are generally in the 15 to 20 percent range, and Canada's GST may eventually get up there. As well, the continued existence of the Canadian federation is in doubt. This has serious economic overtones, because there would inevitably be disagreement about sharing the burden of the national debt, with a likely inflationary fallout.

The rhetoric of central bankers in both Canada and the United States has called for the inflation rate to decline all the way to zero, but in fact their actions have been such as to allow it to creep upward into the 5 percent range, and there is not yet any firm assurance that it will be stopped there. The continuation of massive federal government deficits, far above government targets, adds to the risk of loose monetary policy at some point in the future. Our long-term forecast of 5 percent inflation is a middle-ground estimate, balancing the risks on the low and high side, rather than a specific prediction of a steady course of 5 percent inflation.

5. Interest Rates (%)

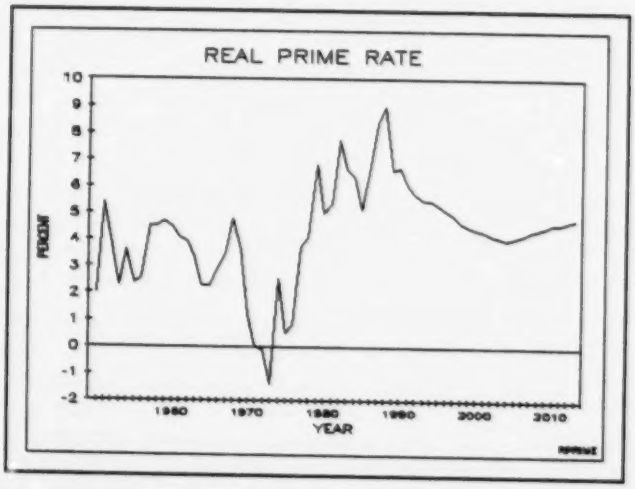
	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015
20-year Bond Rate	13.2	10.0	9.8	9.4	9.1	8.7	9.2
Real Bond Rate*	7.7	5.1	4.8	4.4	4.1	3.7	4.2
Real Treasury Bill Rate	5.0	6.0	5.1	3.7	3.3	2.9	3.3

* Calculated by subtracting the 20 year forecast of the CPI inflation rate.

Real rates of interest have been well above historical averages all through the 1980s because of a combination of tighter central bank monetary policies (to control inflation) and high levels of government borrowing, and they are expected to decline only gradually. The liberalization of eastern Europe is also a significant factor which has contributed to higher interest rates recently. In particular, Germany has been an important world lender, and it is likely that a large fraction of western Germany's savings for the next several years will be invested in eastern Germany. In a worst case scenario, this could raise the world real interest rate by as much as half a percent in the next few years.

Government deficits in the United States have declined considerably from their peak, but the rate of decline appears to have stalled. Moreover, the build up of debt resulting from past deficits has resulted in a large increase in the economy's debt to equity ratio, which will take many years to reduce even if deficits continue to decline. Investors have to be offered a higher real return to make them willing to hold a larger share of their portfolios in the form of government debt. While real interest rates will remain relatively high for the next several years, they will be on a declining trend as these debt pressures diminish.

A gradually increasing personal savings rate is also expected to increase the supply of capital and contribute to lower real interest rates. It has been found that individuals tend to save a larger proportion of their income after the age of 45, and this factor should contribute to higher savings and lower interest rates for the next ten to fifteen years. However, savings rates tend to decline after individuals reach retirement age. Once the baby boom generation starts to retire, savings rates could drop and make capital more costly. This problem is particularly severe in some of the other industrial countries, such as Japan and Germany, and it creates a likelihood that world real interest rates, which have a strong influence on Canadian rates, will start to rise again after the year 2005. As the chart shows, we expect real interest rates to drop sharply following 1990. However, real



interest rates are expected to remain high by historical standards, partly because of high government debt levels. By hindsight, the interest rates of the 1950 to 1978 period proved to be too low, and contributed to a continuous rise in the inflation rate.

6. Canadian Dollar Exchange Rate*

1976 - 1980	90.8		
1981 - 1985	79.3	2001 - 2005	80.0
1986 - 1990	79.5	2006 - 2010	79.0
1991 - 1995	80.0	2011 - 2015	78.0
1996 - 2000	80.0		

* Average value in US cents.

The main determinant of the long-run exchange rate trend is the differential between Canadian and US inflation rates. It is expected that the Canada-US Free Trade Agreement will increase the alignment between Canadian and US monetary policies, and expose the Canadian economy to greater competitive forces, eliminating the historical tendency for Canadian inflation to exceed US inflation. However, the exchange rate currently is above its sustainable value (estimated to be about 80 US cents) as a result of capital inflows resulting from interest rates which are considerably higher in Canada than in the United States. In the Most Likely scenario, the long-run forecast is for a value of the Canadian dollar around 80 U.S. cents, on the assumption of equal inflation rates in Canada and the United States. Even a small difference in the Canadian versus U.S. inflation rate, over a sustained period, could lead to substantial changes in the value of the exchange rate. In particular, political instability resulting from problems with confederation could lead to higher inflation in Canada, and a lower Canadian dollar. The risks associated with the long-run trend of the dollar are discussed in our Alternative Scenarios report.

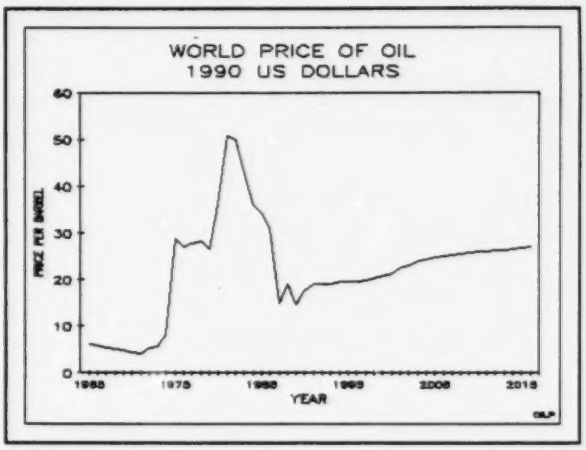
7. Energy Prices*

	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2025	2016-2025
Canadian Crude Oil	-11.4	0.9	3.1	1.3	0.9	0.9	0.3
Natural Gas	-10.8	2.9	5.4	2.2	1.6	1.3	0.6

* Annual average percent change in price (with CPI inflation removed).

The oil market has once again been shaken by a crisis in the Middle East. Iraq's invasion of Kuwait has started a full scale geopolitical and military confrontation in the Middle East. Oil prices have shot up since the invasion by US$10 a barrel from their June levels. The extent and duration of the oil price rise is difficult to project, although most analysts believe that the oil price is unlikely to rise as steeply as in the two previous shocks. OECD countries have accumulated sufficient stocks to last almost 100 days and other oil producers are expected to make up some of the shortfall of Iraq and

Kuwait's oil. However, until the crisis is resolved prices will remain above the US$25 a barrel level. The near-term direction of oil prices will very much depend on the way the conflict is resolved. The fact remains that without the invasion of Kuwait, it would have been hard to push the price of oil much above US$19 even after the July 25 OPEC agreement to raise oil prices to US$21 a barrel. Prior to the invasion, the underlying global demand and supply for oil did not warrant higher prices and we do not expect prices in the US$27 range to be sustainable after the conflict is resolved.



The medium term price projections are almost the same as in last year's forecast and the world oil price is expected to average around US$25 in 1995. Stronger pressure on world oil prices is expected to resume in the 1990s, especially in the second half of the decade. This pressure is due mainly to stronger demand for oil, limited growth potential in non-OPEC production, increased OPEC control of the market, and higher incremental cost of non-OPEC oil. The world oil price is projected to be about US$23 per barrel (in 1990$) by 2000 and about US$25.60 by the year 2010. Deregulation of the domestic oil market is expected to continue. Canadian crude oil prices are projected to move with the trend in international oil prices subject to exchange rate and transportation cost adjustments.

In recent years natural gas prices have been under strong downward pressure as a result of a North American natural gas surplus, the deregulation process and depressed oil prices. Natural gas prices have been declining since 1985 and are currently (the wholesale price at Toronto) over 48% lower, in real 1990 dollars, than five years ago. For the next few years, the direction of natural gas prices remains very uncertain. Most analysts believe that prices have reached the bottom and will rebound during the next few years. Our long-term price projections have remained relatively unchanged. However, prices in the next five years are projected to grow more slowly than in the last year's forecast followed by a period of stronger price increases. As a result, natural gas prices are lower, in real terms, by the year 2000 and almost the same by the end of the forecast period. The combination of a tighter US market, increasing cost of marginal supplies and a preference for that fuel for environmental reasons is expected to drive up North American gas prices. However, the 1985 price level, in real terms, is not reached again until 2010. As the chart shows, the real oil price is not expected to return to the levels reached in the 1970s any time during the forecast horizon.

1.0 FORECAST TABLES

1.1 ONTARIO

	Actual 1976-1980	1981-1985	1986-1990	Forecast 1991-1995	1996-2000	2001-2005	2006-2010	2011-2015
Annual Average Percentage Change:								
Real Gross Domestic Product	2.5	3.9	4.1	3.2	2.9	2.7	2.6	2.4
Consumer Price Index (Ont)	N/A	7.6	5.0	5.1	5.0	5.0	5.0	5.0
Average Hourly Earnings:								
Manufacturing	9.5	8.1	4.8	6.1	6.3	6.5	6.5	6.7
Construction	9.6	6.1	5.1	5.8	6.3	6.5	6.5	6.7
Population	1.0	1.0	1.5	1.1	1.1	1.0	0.9	0.8
Labour Force	2.7	1.8	2.1	1.8	1.5	1.2	1.0	0.7
Employment	2.7	1.5	2.6	2.0	1.6	1.2	1.0	0.7
Labour Productivity	0.0	2.2	1.4	1.2	1.3	1.5	1.6	1.7
Annual Average Rates:								
Unemployment Rate	6.8	8.8	5.7	4.8	4.1	4.0	4.0	4.0

1.2 CANADA

	Actual 1976-1980	1981-1985	1986-1990	Forecast 1991-1995	1996-2000	2001-2005	2006-2010	2011-2015
Economic Growth and Inflation: (Annual Avg Percentage Change)								
Real Gross Domestic Product	3.9	2.9	3.3	3.0	3.0	2.6	2.5	2.3
GDP Deflator	8.3	6.1	4.1	4.8	4.8	5.0	5.0	5.0
Consumer Price Index	8.8	7.5	4.4	5.1	5.0	5.0	5.0	5.0
Industry Selling Price (Mfg)	10.0	5.4	3.3	4.5	4.8	5.5	5.0	5.0
Average Hourly Earnings (Mfg)	10.1	8.1	4.3	6.0	6.0	6.5	6.5	6.7
Real Average Hourly Earnings	1.3	0.6	-0.1	0.9	1.0	1.5	1.5	1.7
Interest Rates (Annual Avg Rate):								
Real Treasury Bill Rate*	1.3	5.0	6.0	5.2	3.7	3.3	2.9	3.2
Treasury Bill Rate	10.1	12.5	10.4	10.3	8.7	8.3	7.9	8.2
Bank Prime	11.1	13.8	11.7	11.7	10.1	9.7	9.2	9.6
Government of Canada Bonds:								
5 years	9.6	12.5	9.9	9.7	9.0	8.8	8.3	8.8
20 years	10.0	13.2	10.0	9.8	9.4	9.1	8.7	9.2
Canadian Dollar in US Cents	90.8	79.3	79.6	80.6	80.0	80.0	79.0	78.0
Net Capital Inflows (% of GDP)	2.6	1.4	2.4	2.5	2.5	1.5	1.0	0.0

* The nominal Treasury Bill Rate minus the rate of CPI increase.

1.3 UNITED STATES

	Actual 1976-1980	1981-1985	1986-1990	<----Forecast----> 1991-1995	1996-2000	2001-2005	2006-2010	2011-2015
Annual Average								
Percentage Change*:								
Real Gross National Product	3.4	2.6	3.1	2.5	2.2	2.0	1.8	1.8
Consumer Prices	8.9	5.5	3.9	4.5	5.0	5.0	5.0	5.0
Compensation per Hour	9.0	5.8	4.9	6.0	6.2	6.3	6.3	6.3
Average Annual Rate:								
Treasury Bill Rate	7.8	10.0	6.9	7.6	7.0	6.7	6.5	7.0
Real Treasury Bill Rate	-1.1	4.5	3.0	3.1	2.0	1.7	1.5	2.0
Government Bond Yields:								
3 to 5 year maturity	8.6	11.5	7.7	8.4	7.7	7.4	7.1	7.6
10 to 20 year maturity	8.9	11.8	8.4	8.9	8.1	7.9	7.5	8.0
Canada-U.S. Interest Differentials:								
Treasury Bills	2.1	2.2	2.7	2.8	1.8	1.6	1.4	1.3
Long-Term Bond Yields	1.1	1.4	1.5	1.2	1.2	1.2	1.2	1.1

* These forecasts are mainly derived from Data Resources Inc.

1.4 ONTARIO INDUSTRIAL STRUCTURE

	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
Share of Provincial Gross Domestic Product Originating in Each Sector (%):										
PRIMARY - TOTAL	6.7	5.0	4.7	4.3	3.5	3.4	3.1	2.9	2.8	2.8
Agriculture	2.5	2.5	2.2	2.1	1.7	1.5	1.3	1.2	1.2	1.2
Logging and Forestry	0.5	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3
Fishing, Hunting & Trapping	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mining	3.6	2.2	2.1	1.8	1.5	1.4	1.4	1.4	1.3	1.3
MANUFACTURING - TOTAL	26.9	26.2	25.7	27.4	25.5	26.3	26.4	26.2	25.9	25.4
Food and Beverage	3.3	3.0	3.0	2.9	2.6	2.5	2.3	2.1	2.0	1.8
Tobacco	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Rubber and Plastics	0.8	0.8	1.0	1.1	1.0	1.1	1.2	1.3	1.3	1.3
Leather, Textiles and Cloth	1.3	1.2	1.4	1.3	1.2	1.0	0.9	0.8	0.8	0.7
Wood Products	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0 4
Furniture and Fixtures	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4
Pulp, Paper and Allied Prod	1.9	1.4	1.6	1.3	1.2	1.2	1.1	1.1	1.0	1.0
Printing and Publishing	1.3	1.3	1.5	1.5	1.4	1.3	1.3	1.3	1.2	1.2
Primary Metal Products	3.6	3.0	2.4	2.2	1.9	1.9	1.9	1.8	1.8	1.7
Fabricated Metal Products	2.9	2.7	2.5	2.3	2.0	2.0	2.0	2.0	2.0	1.9
Machinery	1.6	1.6	1.8	1.3	1.1	1.2	1.2	1.2	1.2	1.2
Transportation Equipment	3.1	4.4	3.1	5.3	4.7	5.2	5.6	5.7	5.7	5.5
Electrical & Electronic Prod	1.8	1.9	2.4	3.4	3.9	4.5	4.7	4.8	5.0	5.0
Non-Metallic Mineral Prod	0.9	1.0	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6
Refined Petroleum & Coal	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Chemical Products	1.8	1.6	1.9	2.0	1.7	1.7	1.7	1.7	1.6	1.6
Other Manufactured Prod	1.1	1.0	1.0	1.0	0.8	0.8	0.8	0.8	0.7	0.7
CONSTRUCTION	6.7	6.4	5.9	5.9	6.4	6.1	6.0	5.9	5.8	5.7
UTILITIES	2.3	2.5	2.7	5	2.4	2.3	2.2	2.1	2.0	2.0
SERVICES - TOTAL	50.1	52.4	54.3	53.7	56.5	56.5	57.0	57.8	58.5	59.1
Transportation & Communic	5.8	6.1	7.2	7.3	7.7	8.0	8.4	8.7	9.0	9.2
Wholesale & Retail Trade	11.4	11.4	10.8	11.5	12.7	12.5	12.2	12.1	11.9	11.9
Finance	13.8	14.6	15.8	15.1	16.8	16.9	17.1	17.4	17.6	17.8
Business & Personal	19.1	20.3	20.5	19.7	19.3	19.1	19.4	19.7	20.0	20.2
PUBLIC ADMINISTRATION	7.3	7.6	6.7	6.2	5.6	5.5	5.3	5.0	5.0	5.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1.5 ENERGY

	ACTUAL					FORECAST					
	1989	1990	1991	1992	1993	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015	2016-2025
	<----------dollars---------->					<----------annual percentage change---------->					
WORLD OIL PRICES											
$ per Barrel											
International Oil Price											
FOB Cost US Imports											
Annual Average Price											
Current US Dollars	16.85	19.00	19.85	20.85	22.30	5.6	8.2	6.5	5.7	5.7	5.4
Constant US 1990 Dollars	17.70	19.00	19.00	19.15	19.60	1.1	3.0	1.4	0.7	0.7	0.4
West Texas Intermediate											
at Chicago											
Current US Dollars	20.20	21.50	22.25	23.25	24.70	5.1	7.9	6.3	5.7	5.7	5.3
Constant US 1990 Dollars	21.20	21.50	21.30	21.30	21.70	0.6	2.8	1.3	0.7	0.7	0.3
CANADIAN CRUDE OIL											
AND NATURAL GAS PRICES											
Canadian $ per Barrel:											
Ontario Refiners' Acquisition											
Cost (Light Crude)											
Annual Average Price											
Current Dollars	22.60	25.50	26.85	28.75	31.50	5.9	8.3	6.3	6.0	6.0	5.3
Constant 1990 Dollars	23.65	25.50	25.30	25.85	27.00	0.9	3.1	1.3	0.9	0.9	0.3
Natural Gas:											
Canadian $ per Million Btu:											
Average Toronto Citygate											
Annual Average Price											
Current Dollar	2.79	2.71	2.91	3.12	3.36	8.4	11.1	8.1	6.7	6.3	5.7
Constant 1990 Dollars	2.92	2.71	2.75	2.81	2.88	3.2	5.8	2.9	1.6	1.3	0.6

Table A.1 Historical and Forecast Data - Rates and Percent Changes

	Real GDP(1)			Consumer Price Index (1)			Population (1)	Labour Force (1)	Employment(1)	Unemployment Rate (2)	Labour Productivity (1)
Year	U.S.	Can.	Ont.	U.S.	Can.	Ont.(3)	Ont.	Ont.	Ont.	Ont.	Ont.
1964	5.3	6.7	7.3	1.3	1.8	N/A	2.3	3.3	3.9	3.2	3.3
1965	5.8	6.6	6.3	1.6	2.5	N/A	2.4	2.3	3.0	2.5	3.2
1966	5.8	6.8	7.0	3.0	3.7	N/A	2.5	6.2	6.1	2.6	0.8
1967	2.9	2.9	4.2	2.8	3.6	N/A	2.4	3.8	3.1	3.2	1.0
1968	4.1	5.4	6.6	4.3	4.0	N/A	1.9	3.1	2.6	3.6	3.8
1969	2.4	5.4	5.8	5.5	4.5	N/A	1.7	3.3	3.7	3.2	2.1
1970	-0.3	2.6	2.2	5.8	3.4	N/A	2.2	3.2	1.9	4.4	0.3
1971	2.8	5.8	5.9	4.3	2.8	N/A	2.0	3.6	2.5	5.4	3.3
1972	5.0	5.7	6.7	3.3	4.8	N/A	1.4	3.6	4.0	5.0	2.5
1973	5.2	7.7	6.0	6.1	7.6	N/A	1.3	3.6	4.4	4.3	1.6
1974	-0.5	4.4	2.1	11.1	10.9	N/A	1.7	4.4	4.2	4.4	-2.0
1975	-1.3	2.6	0.6	9.2	10.8	N/A	1.5	3.6	1.5	6.3	-0.9
1976	4.9	6.2	5.5	5.8	7.5	N/A	1.2	1.7	1.9	6.2	3.6
1977	4.7	3.6	1.9	6.5	8.0	N/A	1.1	2.7	1.8	7.0	0.1
1978	5.3	4.6	2.9	7.6	8.9	N/A	1.0	3.7	3.4	7.2	-0.5
1979	2.5	3.9	2.7	11.3	9.2	N/A	0.7	3.3	4.1	6.5	-1.4
1980	-0.2	1.5	-0.4	13.5	10.2	10.3	0.8	1.8	1.5	6.8	-1.9
1981	1.9	3.7	3.5	10.3	12.5	12.1	0.7	- 2.6	2.9	6.6	0.5
1982	-2.5	-3.2	-4.2	6.2	10.8	10.6	0.9	0.9	-2.6	9.7	-1.6
1983	3.6	3.2	5.4	3.2	5.8	6.2	1.1	1.3	0.6	10.4	4.7
1984	6.8	6.3	9.5	4.3	4.3	4.9	1.2	2.1	3.6	9.0	5.7
1985	3.4	4.8	4.5	3.6	4.0	4.1	1.2	2.2	3.4	8.0	1.2
1986	2.7	3.3	5.3	2.0	4.2	4.4	1.2	2.2	3.4	6.9	1.9
1987	3.4	4.0	6.0	3.6	4.3	5.1	1.6	2.7	3.6	6.1	2.3
1988	4.5	4.4	5.9	4.0	4.0	4.7	1.7	2.5	3.7	5.0	1.9
1989	2.5	3.0	2.8	4.9	5.0	5.8	1.6	1.8	1.8	5.1	1.0
1990	1.6	1.5	0.5	5.0	4.7	4.7	1.5	1.3	0.6	5.8	-0.1
1991	2.1	1.3	1.8	4.3	6.0	6.0	1.4	1.8	1.7	5.9	0.1
1992	2.7	3.4	3.9	4.5	5.0	4.9	1.3	2.0	2.3	5.7	1.6
1993	2.5	3.5	3.5	4.5	4.7	4.8	1.3	2.0	2.4	5.3	1.1
1994	2.5	3.3	3.0	4.5	5.0	4.8	1.1	1.7	2.1	4.9	0.9
1995	2.5	3.4	3.8	4.5	4.8	5.0	1.1	1.7	1.8	4.8	2.0
1996-2000	2.2	3.0	2.9	5.0	5.0	5.0	1.1	1.2	1.5	4.1	1.3
2001-2005	2.0	2.6	2.7	5.0	5.0	5.0	1.0	0.9	1.2	4.0	1.5
2006-2010	1.8	2.5	2.6	5.0	5.0	5.0	0.9	0.7	1.0	4.0	1.6
2010-2015	1.8	2.3	2.4	5.0	5.0	5.0	0.8	0.7	0.7	4.0	1.7

1. Average Annual Percent Change. GNP for US.
2. Percent
3. Statistics Canada, Ontario Composit CPI.

Table A.1 (Cont'd) Historical and Forecast Data - Rates and Percent Changes

	Average Hourly Earnings Manufacturing (1)		Construction	90 Day T-Bill Rate	Prime Rate	Treasury Bill Rate	Government of Canada Bonds		Canadian Dollar (3)
Year	Can.	Ont.	Ont.	Canada (2)		U.S.(2)	5 Year (2)	20 Year (2)	(US cents)
1964	3.6	4.0	4.0	3.7	5.8	3.5	4.7	5.2	92.7
1965	4.8	5.3	9.6	4.0	5.8	3.9	4.9	5.2	92.8
1966	6.1	5.1	9.6	5.0	6.0	4.9	5.5	5.7	92.8
1967	7.0	6.6	8.8	4.6	5.9	4.3	5.6	5.9	92.7
1968	7.4	7.4	8.1	6.3	6.9	5.3	6.7	6.7	92.8
1969	8.2	8.4	1.9	7.2	8.0	6.7	7.7	7.6	92.9
1970	8.0	8.5	6.1	6.0	8.2	6.4	7.1	7.9	95.8
1971	8.9	8.8	2.0	3.6	6.5	4.3	5.6	6.9	99.0
1972	7.8	7.8	9.6	3.6	6.0	4.1	6.3	7.2	100.9
1973	8.9	8.9	9.6	5.5	7.6	7.0	7.0	7.6	100.0
1974	13.4	11.5	0.9	7.8	10.8	7.8	8.1	8.9	102.3
1975	15.7	14.4	1.6	7.4	9.4	5.8	7.7	9.0	98.3
1976	13.8	13.2	4.2	8.9	10.0	5.0	8.4	9.2	101.4
1977	10.8	10.2	2.1	7.3	8.5	5.3	7.9	8.7	94.1
1978	7.2	6.7	5.5	8.7	9.7	7.2	9.0	9.3	87.7
1979	8.8	8.3	6.6	11.7	12.9	10.1	10.4	10.2	85.4
1980	10.1	9.3	9.6	12.8	14.3	11.4	12.4	12.5	85.5
1981	12.0	11.7	1.0	17.7	19.3	14.0	15.7	15.2	83.4
1982	11.7	11.4	8.3	13.6	15.8	10.6	14.0	14.3	81.1
1983	7.0	7.2	6.5	9.3	11.2	8.6	10.6	11.8	81.1
1984	5.9	6.3	1.5	11.1	12.1	9.5	11.9	12.8	77.2
1985	3.9	4.0	3.3	9.4	10.6	7.5	10.4	11.0	73.2
1986	3.1	4.3	3.5	9.0	10.5	6.0	9.2	9.5	72.0
1987	3.5	3.7	6.9	8.1	9.5	5.8	9.4	9.9	75.4
1988	4.9	5.4	3.7	9.5	10.8	6.7	9.8	10.2	81.3
1989	5.5	4.9	6.4	12.0	13.3	8.1	10.2	9.9	84.4
1990	5.4	5.8	5.0	13.2	14.3	7.6	11.1	10.5	84.9
1991	5.8	6.0	4.5	11.8	13.0	7.6	10.5	10.3	83.3
1992	5.5	5.3	5.0	10.7	11.9	7.7	9.7	9.9	81.5
1993	5.9	6.0	6.0	9.7	10.8	7.7	9.6	9.8	79.0
1994	6.3	6.5	6.5	9.7	10.9	7.5	9.4	9.5	79.5
1995	6.3	6.5	6.5	9.5	10.9	7.0	9.3	9.5	79.5
1996-2000	6.0	6.3	6.3	8.7	10.1	7.0	9.0	9.4	80.0
2001-2005	6.5	6.5	6.5	8.3	9.7	6.7	8.8	9.1	80.0
2006-2010	6.5	6.5	6.5	7.9	9.2	6.5	8.3	8.7	79.0
2010-2015	6.7	6.7	6.7	8.2	9.6	7.0	8.8	9.2	78.0

1. Average Annual Percent Change
2. Percent

Table A.2 Historical and Forecast Data - Levels and Indexes

Cost Indicators

Year	Real Growth GNP U.S.(1)	Real Growth GDP Can.(2)	Real Growth GDP Ont.(2)	Consumer Price Index U.S.(3)	Consumer Price Index Can.(4)	Consumer Price Index Ont.(4,8)	Average Hourly Earnings (7) Manufacturing Can.	Average Hourly Earnings (7) Manufacturing Ont.	Average Hourly Earnings (7) Constr. Ont.	Ontario Demographic Variables Popula-tion(5)	Labour Force(5)	Employ-ment(5)	Labour Productivity(6)
1964	1973	164504	66987	31.0	33.2	N/A	1.92	2.06	2.08	6627	2567	2483	26978
1965	2088	175359	71203	31.5	34.0	N/A	2.01	2.17	2.28	6783	2625	2558	27835
1966	2208	187263	76155	32.5	35.2	N/A	2.14	2.28	2.50	6954	2787	2714	28060
1967	2271	192752	79342	33.4	36.5	N/A	2.29	2.43	2.72	7122	2891	2799	28347
1968	2366	203072	84551	34.8	38.0	N/A	2.45	2.61	2.94	7258	2980	2873	29430
1969	2423	213946	89471	36.7	39.7	N/A	2.65	2.83	3.29	7385	3077	2979	30034
1970	2416	219498	91454	38.8	41.0	N/A	2.87	3.07	3.82	7549	3177	3037	30113
1971	2485	232137	96813	40.5	42.2	N/A	3.12	3.34	4.28	7699	3290	3113	31100
1972	2609	245441	103289	41.8	44.2	N/A	3.37	3.60	4.69	7806	3410	3239	31889
1973	2744	264369	109503	44.4	47.6	N/A	3.67	3.92	5.14	7911	3532	3380	32397
1974	2729	276006	111843	49.3	52.8	N/A	4.16	4.37	5.70	8048	3686	3523	31747
1975	2695	283187	112556	53.8	58.5	N/A	4.81	5.00	6.36	8167	3818	3576	31475
1976	2827	300638	118774	56.9	62.9	N/A	5.47	5.66	7.26	8262	3882	3643	32603
1977	2959	311504	121057	60.6	67.9	N/A	6.07	6.24	8.14	8350	3986	3708	32648
1978	3115	325751	124603	65.2	73.9	N/A	6.50	6.66	8.59	8435	4133	3835	32491
1979	3192	338362	127914	72.6	80.7	80.9	7.07	7.21	9.16	8498	4271	3993	32035
1980	3187	343384	127425	82.4	88.9	89.2	7.79	7.88	10.04	8564	4350	4053	31440
1981	3249	355994	131831	90.9	100.0	100.0	8.72	8.80	11.14	8621	4463	4171	31607
1982	3166	344543	126320	96.5	110.8	110.6	9.75	9.80	12.07	8699	4502	4063	31090
1983	3279	355445	133098	99.6	117.2	117.5	10.43	10.51	12.86	8795	4561	4089	32550
1984	3501	377865	145728	103.9	122.3	123.3	11.04	11.17	13.05	8901	4655	4235	34410
1985	3619	395878	152354	107.6	127.2	128.3	11.47	11.61	13.48	9006	4758	4377	34808
1986	3718	408942	160462	109.7	132.5	134.0	11.83	12.11	13.95	9115	4862	4524	35469
1987	3845	425300	170168	113.7	138.2	140.8	12.24	12.55	14.92	9261	4992	4689	36291
1988	4017	444013	180257	118.3	143.8	147.4	12.84	13.23	15.47	9420	5118	4862	37075
1989	4118	457333	185370	124.1	151.0	156.0	13.55	13.88	16.46	9571	5212	4949	37456
1990	4184	464193	186297	130.3	158.1	163.3	14.28	14.69	17.28	9714	5282	4976	37419
1991	4271	470228	189650	135.9	167.6	173.1	15.11	15.57	18.06	9850	5377	5061	37456
1992	4387	486404	197047	142.0	176.0	181.6	15.94	16.39	18.96	9978	5487	5175	38060
1993	4496	503428	203943	148.4	184.2	190.3	16.88	17.37	20.10	10108	5594	5299	38469
1994	4609	520041	210061	155.1	193.4	199.5	17.95	18.50	21.41	10219	5689	5410	38808
1995	4724	537722	218044	162.1	202.7	209.4	19.08	19.71	22.80	10332	5785	5508	39570
2000	5267	623367	251548	206.9	258.7	267.3	25.53	26.75	30.95	10913	6150	5933	42376
2005	5815	708730	287391	264.0	330.2	341.2	34.98	36.65	42.40	11469	6441	6298	45611
2010	6358	801863	326746	336.9	421.5	435.4	47.92	50.21	58.09	11995	6680	6619	49340
2015	6951	898418	367700	430.0	537.9	555.7	66.27	69.44	80.34	12482	6917	6854	53647

1. Billions of 1982 Dollars
2. Millions of 1981 Dollars
3. 1982 to 1984=100
4. 1981 = 100
5. Thousands
6. 1981 Dollars
7. Dollars
8. Statistics Canada, Ontario Composite CPI

SHORT-TERM ECONOMIC OUTLOOK
FALL REVIEW

September 1990

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This Review replaces the May Short-Term Economic Outlook. The forecasts contained in it have been approved by the Vice-President, Corporate Planning. They have the status of Corporate Predictions as defined under Section 7 of the OOOH Manual.

Contributors: P.S. Spiro, E.P. Crawford, A.T. Zerek, W.H. Tharp, M. Angastiniotis and C. De Borja (stenographer).

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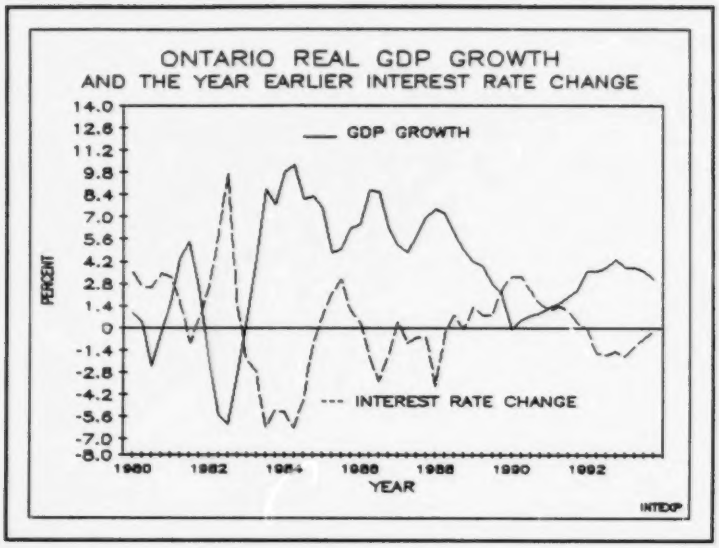


1. ECONOMIC GROWTH*

	Actual	Forecast			
	1989	1990	1991	1992	1993
Real GDP - Canada	3.0	1.5	1.3	3.4	3.5
Real GDP - Ontario	2.8	0.5	1.8	3.9	3.5
Real GNP - US	2.5	1.6	2.1	2.7	2.5

* Percentage change from previous year.

Economic growth continued to weaken through the first half of 1990 with the growth disparity between Ontario and the rest of Canada widening further. The western provinces are still enjoying moderate growth and this has kept overall Canadian GDP growing, but Ontario suffered a pronounced slowdown in activity. At this point, it appears that Canadian economic growth will deteriorate somewhat further but that Ontario may have already experienced the worst of the downturn.

Analysis shows that there is generally a delay of anywhere from twelve to fifteen months before interest rates affect economic growth. This is illustrated in the chart above, in which it can be seen that real GDP growth is approximately the mirror image of the change in interest rates which occurred one year earlier. This indicator suggests that economic growth will bottom out around the middle of 1990, and that the bottom will not be too severe. This is, of course, contingent on a continuing decline in interest rates.

Ontario, however, is somewhat less sensitive to Canadian interest rates than the rest of the Canadian economy. In fact, this province is more closely linked to the US economy and US interest rates than to Canada and Canadian rates. The US prime rate has been edging downward for more than a year now thus suggesting that Ontario may well be experiencing slightly better economic conditions than the rest of Canada as early as this fall. Nonetheless, any recovery initiated by an increase in exports to the US will be dampened by the fragile state of domestic demand as well as the depressed outlook for real estate and construction activity.

The turbulent oil supply situation creates another source of uncertainty for the outlook. Canada exports about as much oil as it imports, and is a net energy exporter, and so Canada as a whole is better positioned than most other industrial countries. If the Mid-East crisis leads to increased oil development in western Canada, Ontario manufacturing would get some spinoffs by being able to sell pipe and other supplies to the western provinces. However, the net impact on Ontario would clearly be negative, since higher oil prices would drain money out of the province. Moreover, rising oil prices would have a negative effect on car sales. At this time it is too early to guess how long the current crisis will continue. If oil prices settle down within a few months, the effect on Ontario GDP is likely to be insignificant.

2. UNEMPLOYMENT (%)

	Actual	Forecast			
	1989	1990	1991	1992	1993
Canada	7.6	8.0	8.3	7.9	7.2
Ontario	5.1	5.8	5.9	5.7	5.3

Employment opportunities in Ontario have withered noticeably in the face of weaker economic growth. Job creation has plummeted from a high of 239,000 in June of 1988 to only 7,000 in May of 1990. Even so, the present situation is unlikely to deteriorate much further. Businesses have maintained fairly streamlined employee numbers through the 1983 to 1989 period, and thus large scale layoffs like those of 1982 are not expected. Unemployment rates may rise somewhat from current levels, but population growth is moderating and participation in the labour force is declining. Therefore, the increase in the unemployment rate is expected to be smaller than in previous slowdowns of comparable magnitude.

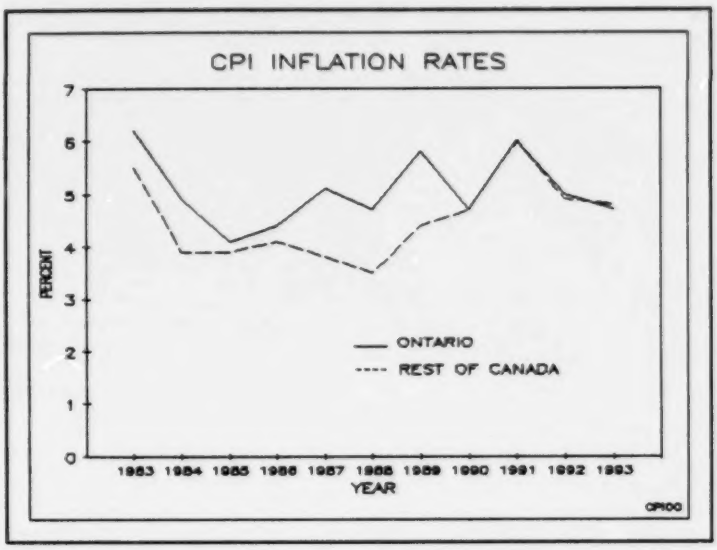
3. INFLATION - CONSUMER PRICE INDEX*

	Actual	Forecast			
	1989	1990	1991	1992	1993
Ontario Composite**	5.8	4.7	6.0	4.9	4.8
Toronto	6.3	4.8	6.0	5.0	5.0
Canada	5.1	4.7	6.0	5.0	4.7
United States	4.8	5.0	4.3	4.5	4.5

* Percentage change from previous year.
** Provincial Consumer Price Index published by Statistics Canada.

A significant moderation in Canadian inflation has occurred over the first half of 1990. Year-over-year increases in the Canadian Consumer Price Index have dipped from a peak of 5.5% this past January to only 4.5% in May. The moderation has been even more spectacular in Toronto, with

price increases falling from 6.6% to 4.5%. Declining real estate values, a more stable tax climate and a much less robust economy were the main factors. In fact, as shown in the chart, the positive gap between Toronto and Canadian inflation, which averaged 1.5 percentage points through most of 1987, 1988 and 1989, has now disappeared. Moreover, given the relatively pessimistic expectations for the Ontario economy over the very near term, price increases here may actually undercut those in many of the other Canadian provinces.



Although basic underlying inflation is forecast to remain within the 4 to 4.5% range in 1991, with wages presenting the only source of concern, introduction of a 7% Goods and Services Tax will add about 1.5 percentage points to national price increases. This assumes that price increases as well as price declines initiated by the GST will be fully passed on to consumers. It also assumes that workers are able to recoup only a fraction of the purchasing power lost because of the tax.

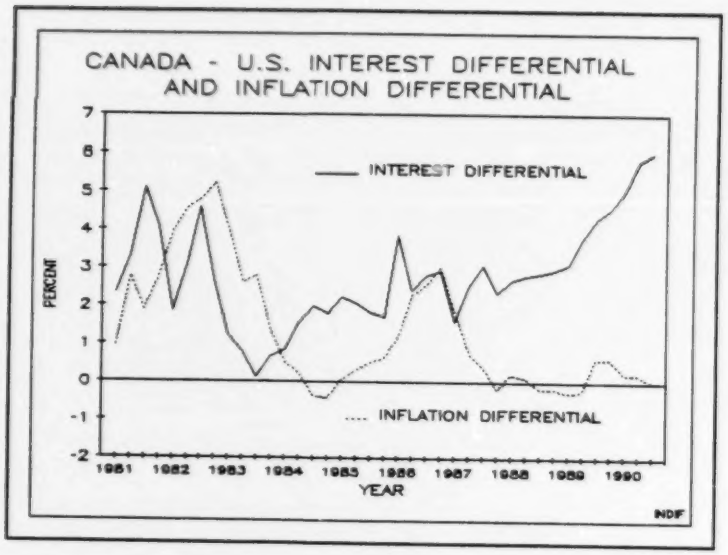
The turbulence in the Middle East could have a significant effect on 1991's inflation rate. Our 6% CPI inflation forecast assumed an average international crude oil price of $18 per barrel, which may still be possible if tensions abate. However, the price could easily be in the $22 to $26 range if there are supply disruptions. Each $4 increase would add roughly 0.5% onto the 6% base inflation rate.

4. FINANCIAL MARKETS

	Actual	Forecast		
	1989	1990	1991	1992
Prime Interest Rate(%)	13.3	14.5	13.2	11.9
Gov't Long-Term Bond Rate(%)	9.9	10.5	10.3	9.9
Canadian Dollar (in US cents)	84.4	84.9	83.3	81.5

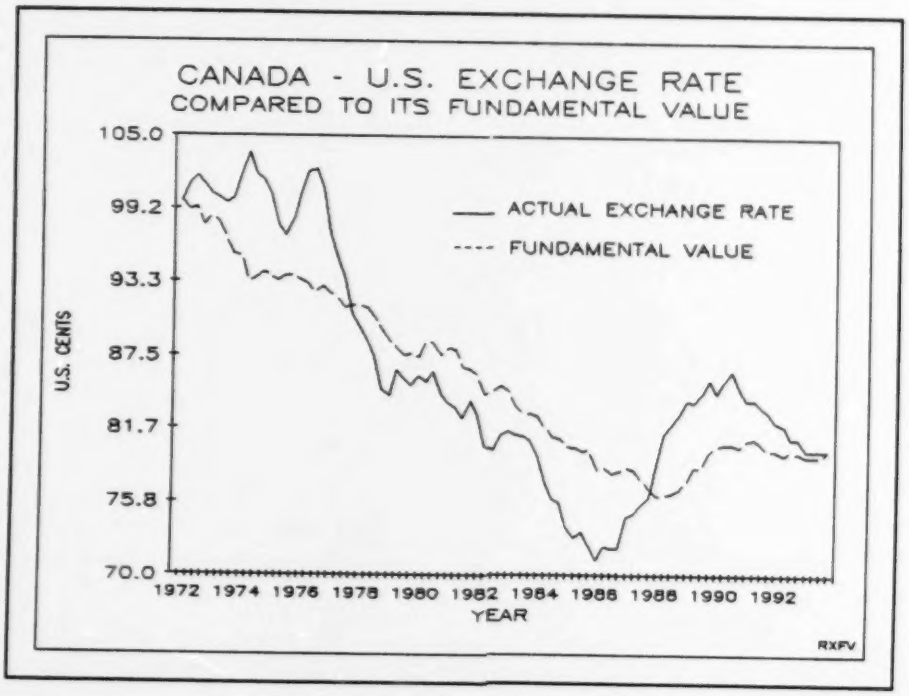
Canadian short-term interest rates in the third quarter of 1990 remained an amazing 6 percentage points above their U.S. counterparts. The average differential in the 1980s was only about 2.4 percentage points, and in the distant past of the 1970s the average differential between Canadian and U.S. interest rates was only about 0.7 percent. What is even more remarkable, as seen in the chart at the right, is that this high interest premium is occurring at a time when Canadian and U.S. inflation rates are about equal. The Bank of Canada is more concerned than the U.S. central bank about the risk of rising inflation, especially because of a recent pattern of high wage settlements.

In spite of the current weakness of the economy, there are two significant inflationary risks facing the economy in 1991, from the Goods and Service Tax and rising oil prices. There is a fear that the GST will contribute to rising wages, although its total impact should not be too severe if sellers pass on all the savings from the elimination of the federal Manufacturers' Sales Tax which is being replaced by the GST. The Bank of Canada will probably want to remain vigilant through the first few months of 1991 until it sees how the GST is being absorbed. If its inflationary impact is not too severe a gradual reduction in interest rates will continue.



The risks of inflation will also have a significant impact on the bond market, where lenders will be more reluctant to make long-term loans. Long-term bond yields are unlikely to go below 10 percent until these risks abate.

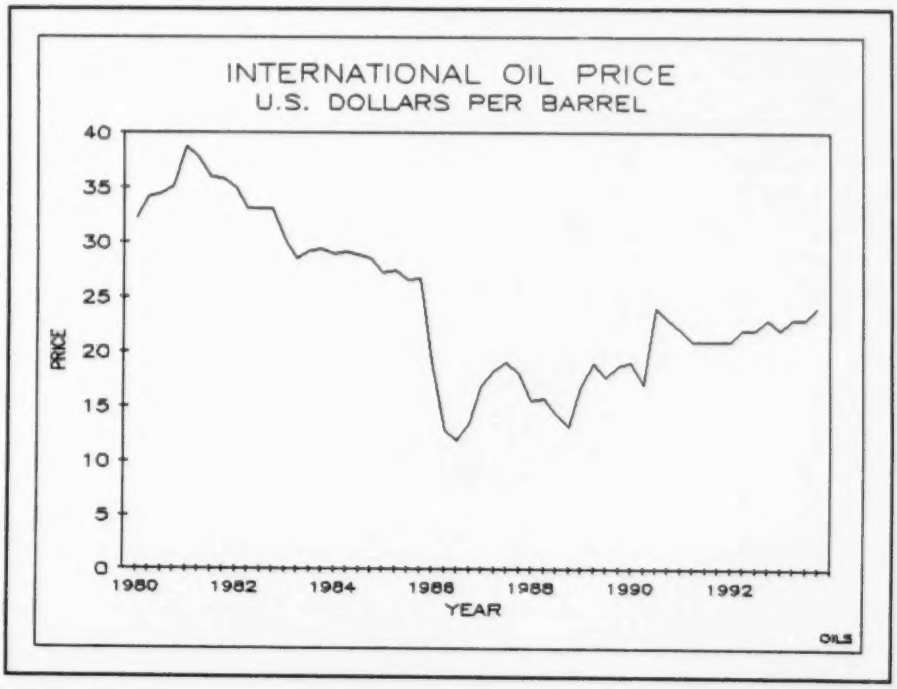
The Canadian dollar has recently traded as high as 87 U.S. cents. We estimate that its appropriate value, to keep Canadian exports competitive, is only about 80 cents, and Canadian manufacturing exports have been severely hurt by the dollar's overvaluation in the past year. However, as seen in the chart at the right, this degree of deviation of the dollar from its fundamental value is well within the range of historical experience, and is likely to be eliminated only gradually. The high value of the dollar makes imported goods cheaper, and has helped to keep inflation in check. A sudden drop in the dollar, combined with the GST and oil prices, could easily push the 1991 CPI increase above 8 percent. The Bank of Canada must be acutely aware of this risk, and given the way they interpret their mandate they are more concerned



about the risk of higher inflation than the risk of causing a recession. Therefore, it is likely that the reduction of Canadian interest rates will be quite gradual, so as to avoid a run on the Canadian dollar.

5. ENERGY PRICES

	Actual	Forecast			
	1989	1990	1991	1992	1993
International Crude Oil - FOB Cost US Imports, US$ per barrel	16.54	19.00	19.85	20.85	22.30
- West Texas Intermediate at Chicago, US$ per barrel	20.20	21.50	22.25	23.25	24.70
Domestic Crude Oil (Ontario), Cdn$ per barrel	22.60	25.50	26.85	28.74	31.50
Natural Gas (Toronto Citygate) Cdn$ per MMBtu	2.79	2.71	2.91	3.12	3.36



The oil market has once again been shaken by a crisis in the Middle East. This time, on August 2, Iraq invaded small but rich (in cash and oil reserves) Kuwait, sparking what is developing into a full scale geopolitical and military confrontation in the Middle East. Military threats by Iraq against some Persian Gulf Arab oil-producing states intensified in July when Iraq strongly demanded that all members of OPEC fully adhere to their production quotas and that OPEC set its benchmark price at least at US$21 per barrel. In the first half of 1990, oil prices around the world had been declining as a result of excess

supplies, high inventories and little evidence of OPEC members abiding by agreed production ceilings. Crude oil prices declined to their lowest level since November 1988 and West Texas Intermediate (WTI) crude fell below US$16 per barrel in June. It was our expectation that since only modest cutbacks were needed to bring the oil market back into balance the cartel would agree on production cuts and oil prices would be stronger in the second half of the year. During the OPEC meeting on July 25, an agreement was reportedly reached to accommodate production levels by Kuwait and UAE within OPEC's overall quota of 22.5 mbd and a new benchmark price was set at US$21 per barrel. Iraq accepted the new arrangement but demanded higher prices. However, the underlying global demand and supply for oil did not warrant higher prices and the invasion of oil rich Kuwait seems to be a part of Iraq's plan to gain stronger influence on the oil market. Following the invasion, crude prices soared to the highest levels in over 4 years. WTI rose to over US$29 a barrel and has been hovering around US$26 in mid August. In this forecast, the 1990 average price has been adjusted assuming the average price for WTI at around US$24 a barrel for the second half of the year. For the following years this forecast is about a dollar higher for 1991 than in the Spring Outlook and almost the same at US$27.50 a barrel by 1995.

The industrial world has accumulated very large oil stocks equivalent to a record 100 days' worth of consumption - enough to replace all of Iraqi and Kuwait oil for more than two years. In addition, a quick military response to secure Saudi Arabia and other Gulf producers may quickly pay back in increased oil production by these countries. In fact, Saudi Arabia, a leading OPEC moderate, has already called for an OPEC meeting to consider possible steps to minimize the impact of the invasion. However, the oil market will remain very volatile and the near-term direction is very difficult to predict.

Canadian oil prices have followed a pattern similar to the world prices; since February this year oil prices have fallen by around $6 a barrel. Canadian posted prices for light sweet crude fell to around $20 in June from over $26 in February. The full impact of Middle East tension and higher world oil prices will be felt with some delay in Ontario. For 1990, Ontario Refiner's Acquisition Cost (ORAC) is projected to average about $25.50 a barrel. Canadian crude oil prices are expected to continue moving with the trend in world oil prices subject to exchange rate and transportation cost adjustment.

In recent years, natural gas prices have been under strong downward pressure as a result of a North American natural gas surplus, deregulation and depressed oil prices. In 1990, prices will stay almost unchanged as a result of the latest agreement between Western Gas Marketing and local distributors. Most analysts believe that natural gas prices have reached the trough in the price slide that started in 1984 and prices are expected to rise again in 1991 and in the following years as a result of stronger demand, gradual tightening of the U.S. market and the increasing cost of marginal supplies. However, in real terms natural gas prices will remain well below the levels of the 1980s.

6. IMPORTANT RISKS TO THE FORECAST

The economy has now definitely entered a long-awaited economic slowdown. The key question is how long it will continue and just how great the misery will become before we can leave it. This hinges on a complex mix of economic and political factors. It appears that, for the time being, the central banks of both Canada and the United States have abandoned their targets of achieving zero inflation (something which hardly anyone outside the central banks took very seriously anyway), and will be content with merely keeping inflation below 5 percent in the medium term. Interest rates have started to decline, with the impetus coming from the United States, where there is great concern about the fragile state of the financial system: growing numbers of banks are joining the notorious

savings and loan institutions in insolvency. The Bush administration has stated that it wants lower interest rates, and the Federal Reserve Chairman (whose term comes up for renewal in 1991) seems willing to comply. If interest rates continue to decline then it is reasonable to expect that the Ontario economy will bottom out in 1990 without too much damage, and real GDP growth will start to rise in 1991.

Unfortunately, the political crisis in the Middle East creates major risks of a new economic crisis. This situation would become especially serious if there is a war, which could knock out Saudi Arabian oil production as well. It is likely that the central banks will feel obligated to offset oil price increases with interest rate increases to prevent an upsurge of inflation. The countries which did this in the 1970s (such as Japan and Germany) found that a short, painful adjustment was better than a long drawn-out one. This would probably imply a major recession in the 1991-92 period.

Prediction Ranges (Judgmental 50% Probability)

	1990	1991
Ontario Real GDP Growth*	-0.5 to 1.5	1.0 to 3.0
Ontario CPI*	4.5 to 5.0	5.5 to 7.0
Gov't Long-Term Bond Rate (%)**	10.0 to 10.8	9.5 to 11.0
Canadian Dollar in US Cents**	84.5 to 86	83 to 86

* Percent change
** Annual average value

1.0 FORECAST TABLES

1.1 ONTARIO

	Actual	Forecast			
	1989	1990	1991	1992	1993
Economic Growth Indicators (% change)					
Real Gross Domestic Product	2.8	0.5	1.8	3.9	3.5
Population	1.6	1.5	1.4	1.3	1.3
Labour Force	1.8	1.3	1.8	2.0	2.0
Employment	1.8	0.6	1.7	2.3	2.4
Labour Productivity	1.0	-0.1	0.1	1.6	1.1
Unemployment Rate (%)	5.1	5.8	5.9	5.7	5.3
Housing Starts ('000 units)	93.3	70.4	62.5	69.2	75.8
Cost Indicators (% change)					
Consumer Price Index					
Toronto	6.3	4.8	6.0	5.0	5.0
Ontario Average*	5.8	4.7	6.0	4.9	4.8
Average Hourly Earnings					
Manufacturing	4.9	5.8	6.0	5.3	6.0
Construction	6.4	5.0	4.5	5.0	6.0

* Composite Price Index published by Statistics Canada.

1.2 CANADA

	Actual	Forecast			
	1989	1990	1991	1992	1993
Economic Growth Indicators (% change)					
Real Gross Domestic Product	3.0	1.5	1.3	3.4	3.5
Population	1.2	1.3	1.0	0.9	0.8
Labour Force	1.7	1.8	1.5	1.4	1.6
Employment	2.0	1.1	0.9	1.9	2.3
Labour Productivity	1.0	0.4	0.4	1.6	1.2
Unemployment Rate (%)	7.5	8.2	8.7	8.3	7.7
Cost Indicators (% change)					
Consumer Price Index					
Total	5.0	4.7	6.0	5.0	4.7
Food	3.1	4.1	1.7	4.8	5.2
Fuel	3.4	7.6	5.7	3.4	5.1
GDP Deflator	4.9	3.9	4.9	4.9	4.4
Industrial Product Price (Economy Aggregate)	2.3	1.4	2.9	5.2	5.8
Average Hourly Earnings - Mfg	5.5	5.4	5.8	5.5	5.9
Interest Rates (%)					
90 Day Treasury Bill Rate	12.0	13.2	11.8	10.7	9.7
Prime Lending Rate	13.3	14.3	13.0	11.9	10.8
Real Treasury Bill Rate	7.0	8.5	5.8	5.7	5.0
Canada-US T-Bill Differential	3.9	5.6	4.2	3.0	2.0
Government of Canada Bonds					
5 year	10.2	11.1	10.5	9.7	9.6
20 year	9.9	10.5	10.3	9.9	9.8
Foreign Exchange					
Canadian Dollar (US cents)	84.4	84.9	83.3	81.5	79.0

1.3 UNITED STATES	Actual	Forecast			
	1989	1990	1991	1992	1993
Growth and Cost Indicators (% change)					
Real Gross National Product	2.5	1.6	2.1	2.7	2.5
Consumer Price Index	4.9	5.0	4.3	4.5	4.5
Average Hourly Earnings-Mfg	2.9	3.1	3.5	3.8	4.0
Total Hourly Compensation	5.4	5.5	5.8	5.8	6.0
International Trade					
Current Account	-110	-90	-97	-94	-115
Merchandise Trade Balance	-109	-94	-100	-98	-116
Financial Sector					
Treasury Bill Rate	8.1	7.6	7.6	7.7	7.7
Government Bonds					
5 year maturity	8.7	8.3	8.1	8.2	8.0
10 to 30 year maturity	8.6	8.5	8.7	8.8	8.6

1.4 ENERGY	Actual 1989	Forecast 1990	1991	1992	1993
WORLD OIL PRICES ($ per Barrel)					
[1] International Oil Price FOB Cost US Imports					
Current US Dollars	16.85	19.00	19.85	20.85	22.30
Constant US 1990 Dollars	17.70	19.00	19.00	19.15	19.60
West Texas Intermediate (WTI) at Chicago					
Current US Dollars	20.20	21.50	22.25	23.25	24.70
Constant US 1990 Dollars	21.20	21.50	21.30	21.30	21.70
CANADIAN CRUDE OIL & NATURAL GAS PRICES					
Crude Oil (Canadian $ per Barrel)					
Ontario Refiners' Acquisition Cost (Light Crude)					
Current Dollars	22.60	25.50	26.85	28.75	31.50
Constant 1990 Dollars	23.65	25.50	25.30	25.85	27.00
Natural Gas (Canadian $ per Million Btu's)					
Average Toronto Citygate Price					
Current Dollar	2.79	2.71	2.91	3.12	3.36
Constant 1990 Dollars	2.92	2.71	2.75	2.81	2.88

1. FOB Cost of US Imports are used now as a proxy for the average international crude oil price.

Table A.1 Historical and Forecast Data - Rates and Percent Changes

Year	Real GDP(1)			Consumer Price Index (1)			Population (1)	Labour Force (1)	Employment(1)	Unemployment Rate (2)	Labour Productivity (1)
	U.S.	Can.	Ont.	U.S.	Can.	Ont.(3)	Ont.	Ont.	Ont.	Ont.	Ont.
1964	5.3	6.7	7.3	1.3	1.8	N/A	2.3	3.3	3.9	3.2	3.3
1965	5.8	6.6	6.3	1.6	2.5	N/A	2.4	2.3	3.0	2.5	3.2
1966	5.8	6.8	7.0	3.0	3.7	N/A	2.5	6.2	6.1	2.6	0.8
1967	2.9	2.9	4.2	2.8	3.6	N/A	2.4	3.8	3.1	3.2	1.0
1968	4.1	5.4	6.6	4.3	4.0	N/A	1.9	3.1	2.6	3.6	3.8
1969	2.4	5.4	5.8	5.5	4.5	N/A	1.7	3.3	3.7	3.2	2.1
1970	-0.3	2.6	2.2	5.8	3.4	N/A	2.2	3.2	1.9	4.4	0.3
1971	2.8	5.8	5.9	4.3	2.8	N/A	2.0	3.6	2.5	5.4	3.3
1972	5.0	5.7	6.7	3.3	4.8	N/A	1.4	3.6	4.0	5.0	2.5
1973	5.2	7.7	6.0	6.1	7.6	N/A	1.3	3.6	4.4	4.3	1.6
1974	-0.5	4.4	2.1	11.1	10.9	N/A	1.7	4.4	4.2	4.4	-2.0
1975	-1.3	2.6	0.6	9.2	10.8	N/A	1.5	3.6	1.5	6.3	-0.9
1976	4.9	6.2	5.5	5.8	7.5	N/A	1.2	1.7	1.9	6.2	3.6
1977	4.7	3.6	1.9	6.5	8.0	N/A	1.1	2.7	1.8	7.0	0.1
1978	5.3	4.6	2.9	7.6	8.9	N/A	1.0	3.7	3.4	7.2	-0.5
1979	2.5	3.9	2.7	11.3	9.2	N/A	0.7	3.3	4.1	6.5	-1.4
1980	-0.2	1.5	-0.4	13.5	10.2	10.3	0.8	1.8	1.5	6.8	-1.9
1981	1.9	3.7	3.5	10.3	12.5	12.1	0.7	2.6	2.9	6.6	0.5
1982	-2.5	-3.2	-4.2	6.2	10.8	10.6	0.9	0.9	-2.6	9.7	-1.6
1983	3.6	3.2	5.4	3.2	5.8	6.2	1.1	1.3	0.6	10.4	4.7
1984	6.8	6.3	9.5	4.3	4.3	4.9	1.2	2.1	3.6	9.0	5.7
1985	3.4	4.8	4.5	3.6	4.0	4.1	1.2	2.2	3.4	8.0	1.2
1986	2.7	3.3	5.3	2.0	4.2	4.4	1.2	2.2	3.4	6.9	1.9
1987	3.4	4.0	6.0	3.6	4.3	5.1	1.6	2.7	3.6	6.1	2.3
1988	4.5	4.4	5.9	4.0	4.0	4.7	1.7	2.5	3.7	5.0	1.9
1989	2.5	3.0	2.8	4.9	5.0	5.8	1.6	1.8	1.8	5.1	1.0
1990	1.6	1.5	0.5	5.0	4.7	4.7	1.5	1.3	0.6	5.8	-0.1
1991	2.1	1.3	1.8	4.3	6.0	6.0	1.4	1.8	1.7	5.9	0.1
1992	2.7	3.4	3.9	4.5	5.0	4.9	1.3	2.0	2.3	5.7	1.6
1993	2.5	3.5	3.5	4.5	4.7	4.8	1.3	2.0	2.4	5.3	1.1
1994	2.5	3.3	3.0	4.5	5.0	4.8	1.1	1.7	2.1	4.9	0.9
1995	2.5	3.4	3.8	4.5	4.8	5.0	1.1	1.7	1.8	4.8	2.0
1996-2000	2.2	3.0	2.9	5.0	5.0	5.0	1.1	1.2	1.5	4.1	1.3
2001-2005	2.0	2.6	2.7	5.0	5.0	5.0	1.0	0.9	1.2	4.0	1.5
2006-2010	1.8	2.5	2.6	5.0	5.0	5.0	0.9	0.7	1.0	4.0	1.6
2010-2015	1.8	2.3	2.4	5.0	5.0	5.0	0.8	0.7	0.7	4.0	1.7

1. Average Annual Percent Change. GNP for US.
2. Percent
3. Statistics Canada, Ontario Composit CPI.

Table A.1 (Cont'd) Historical and Forecast Data - Rates and Percent Changes

	Average Hourly Earnings Manufacturing (1)		Construction	90 Day T-Bill Rate	Prime Rate	Treasury Bill Rate	Government of Canada Bonds		Canadian Dollar (3)
Year	Can.	Ont.	Ont.	Canada (2)		U.S.(2)	5 Year (2)	20 Year (2)	(US cents)
1964	3.6	4.0	4.0	3.7	5.8	3.5	4.7	5.2	92.7
1965	4.8	5.3	9.6	4.0	5.8	3.9	4.9	5.2	92.8
1966	6.1	5.1	9.6	5.0	6.0	4.9	5.5	5.7	92.8
1967	7.0	6.6	8.8	4.6	5.9	4.3	5.6	5.9	92.7
1968	7.4	7.4	8.1	6.3	6.9	5.3	6.7	6.7	92.8
1969	8.2	8.4	1.9	7.2	8.0	6.7	7.7	7.6	92.9
1970	8.0	8.5	6.1	6.0	8.2	6.4	7.1	7.9	95.8
1971	8.9	8.8	2.0	3.6	6.5	4.3	5.6	6.9	99.0
1972	7.8	7.8	9.6	3.6	6.0	4.1	6.3	7.2	100.9
1973	8.9	8.9	9.6	5.5	7.6	7.0	7.0	7.6	100.0
1974	13.4	11.5	0.9	7.8	10.8	7.8	8.1	8.9	102.3
1975	15.7	14.4	1.6	7.4	9.4	5.8	7.7	9.0	98.3
1976	13.8	13.2	4.2	8.9	10.0	5.0	8.4	9.2	101.4
1977	10.8	10.2	2.1	7.3	8.5	5.3	7.9	8.7	94.1
1978	7.2	6.7	5.5	8.7	9.7	7.2	9.0	9.3	87.7
1979	8.8	8.3	6.6	11.7	12.9	10.1	10.4	10.2	85.4
1980	10.1	9.3	9.6	12.8	14.3	11.4	12.4	12.5	85.5
1981	12.0	11.7	1.0	17.7	19.3	14.0	15.7	15.2	83.4
1982	11.7	11.4	8.3	13.6	15.8	10.6	14.0	14.3	81.1
1983	7.0	7.2	6.5	9.3	11.2	8.6	10.6	11.8	81.1
1984	5.9	6.3	1.5	11.1	12.1	9.5	11.9	12.8	77.2
1985	3.9	4.0	3.3	9.4	10.6	7.5	10.4	11.0	73.2
1986	3.1	4.3	3.5	9.0	10.5	6.0	9.2	9.5	72.0
1987	3.5	3.7	6.9	8.1	9.5	5.8	9.4	9.9	75.4
1988	4.9	5.4	3.7	9.5	10.8	6.7	9.8	10.2	81.3
1989	5.5	4.9	6.4	12.0	13.3	8.1	10.2	9.9	84.4
1990	5.4	5.8	5.0	13.2	14.3	7.6	11.1	10.5	84.9
1991	5.8	6.0	4.5	11.8	13.0	7.6	10.5	10.3	83.3
1992	5.5	5.3	5.0	10.7	11.9	7.7	9.7	9.9	81.5
1993	5.9	6.0	6.0	9.7	10.8	7.7	9.6	9.8	79.0
1994	6.3	6.5	6.5	9.7	10.9	7.5	9.4	9.5	79.5
1995	6.3	6.5	6.5	9.5	10.9	7.0	9.3	9.5	79.5
1996-2000	6.0	6.3	6.3	8.7	10.1	7.0	9.0	9.4	80.0
2001-2005	6.5	6.5	6.5	8.3	9.7	6.7	8.8	9.1	80.0
2006-2010	6.5	6.5	6.5	7.9	9.2	6.5	8.3	8.7	79.0
2010-2015	6.7	6.7	6.7	8.2	9.6	7.0	8.8	9.2	78.0

1. Average Annual Percent Change
2. Percent

Table A.2 Historical and Forecast Data - Levels and Indexes

Cost Indicators

Year	Real Growth GNP U.S.(1)	Real Growth GDP Can.(2)	Consumer Price Index Ont.(2)	Consumer Price Index U.S.(3)	Consumer Price Index Can.(4)	Consumer Price Index Ont.(4,8)	Average Hourly Earnings (7) Manufacturing Can.	Average Hourly Earnings (7) Manufacturing Ont.	Average Hourly Earnings (7) Constr. Ont.	Ontario Demographic Variables Popula-tion(5)	Labour Force(5)	Employ-ment(5)	Labour Productivity(6)
1964	1973	164504	66987	31.0	33.2	N/A	1.92	2.06	2.08	6627	2567	2483	26978
1965	2088	175359	71203	31.5	34.0	N/A	2.01	2.17	2.28	6783	2625	2558	27835
1966	2208	187263	76155	32.5	35.2	N/A	2.14	2.28	2.50	6954	2787	2714	28060
1967	2271	192752	79342	33.4	36.5	N/A	2.29	2.43	2.72	7122	2891	2799	28347
1968	2366	203072	84551	34.8	38.0	N/A	2.45	2.61	2.94	7258	2980	2873	29430
1969	2423	213946	89471	36.7	39.7	N/A	2.65	2.83	3.29	7385	3077	2979	30034
1970	2416	219498	91454	38.8	41.0	N/A	2.87	3.07	3.82	7549	3177	3037	30113
1971	2485	232137	96813	40.5	42.2	N/A	3.12	3.34	4.28	7699	3290	3113	31100
1972	2609	245441	103289	41.8	44.2	N/A	3.37	3.60	4.69	7806	3410	3239	31889
1973	2744	264369	109503	44.4	47.6	N/A	3.67	3.92	5.14	7911	3532	3380	32397
1974	2729	276006	111843	49.3	52.8	N/A	4.16	4.37	5.70	8048	3686	3523	31747
1975	2695	283187	112556	53.8	58.5	N/A	4.81	5.00	6.36	8167	3818	3576	31475
1976	2827	300638	118774	56.9	62.9	N/A	5.47	5.66	7.26	8262	3882	3643	32603
1977	2959	311504	121057	60.6	67.9	N/A	6.07	6.24	8.14	8350	3986	3708	32648
1978	3115	325751	124603	65.2	73.9	N/A	6.50	6.66	8.59	8435	4133	3835	32491
1979	3192	338362	127914	72.6	80.7	80.9	7.07	7.21	9.16	8498	4271	3993	32035
1980	3187	343384	127425	82.4	88.9	89.2	7.79	7.88	10.04	8564	4350	4053	31440
1981	3249	355994	131831	90.9	100.0	100.0	8.72	8.80	11.14	8621	4463	4171	31607
1982	3166	344543	126320	96.5	110.8	110.6	9.75	9.80	12.07	8699	4502	4063	31090
1983	3279	355445	133098	99.6	117.2	117.5	10.43	10.51	12.86	8795	4561	4089	32550
1984	3501	377865	145728	103.9	122.3	123.3	11.04	11.17	13.05	8901	4655	4235	34410
1985	3619	395878	152354	107.6	127.2	128.3	11.47	11.61	13.48	9006	4758	4377	34808
1986	3718	408942	160462	109.7	132.5	134.0	11.83	12.11	13.95	9115	4862	4524	35469
1987	3845	425300	170168	113.7	138.2	140.8	12.24	12.55	14.92	9261	4992	4689	36291
1988	4017	444013	180257	118.3	143.8	147.4	12.84	13.23	15.47	9420	5118	4862	37075
1989	4118	457333	185370	124.1	151.0	156.0	13.55	13.88	16.46	9571	5212	4949	37456
1990	4184	464193	186297	130.3	158.1	163.3	14.28	14.69	17.28	9714	5282	4976	37419
1991	4271	470228	189650	135.9	167.6	173.1	15.11	15.57	18.06	9850	5377	5061	37456
1992	4387	486404	197047	142.0	176.0	181.6	15.94	16.39	18.96	9978	5487	5175	38060
1993	4496	503428	203943	148.4	184.2	190.3	16.88	17.37	20.10	10108	5594	5299	38469
1994	4609	520041	210061	155.1	193.4	199.5	17.95	18.50	21.41	10219	5689	5410	38808
1995	4724	537722	218044	162.1	202.7	209.4	19.08	19.71	22.80	10332	5785	5508	39570
2000	5267	623367	251548	206.9	258.7	267.3	25.53	26.75	30.95	10913	6150	5933	42376
2005	5815	708730	287391	264.0	330.2	341.2	34.98	36.65	42.40	11469	6441	6298	45611
2010	6358	801863	326746	336.9	421.5	435.4	47.92	50.21	58.09	11995	6680	6619	49340
2015	6951	898418	367700	430.0	537.9	555.7	66.27	69.44	80.34	12482	6917	6854	53647

1. Billions of 1982 Dollars
2. Millions of 1981 Dollars
3. 1982 to 1984=100
4. 1981 = 100
5. Thousands
6. 1981 Dollars
7. Dollars
8. Statistics Canada, Ontario Composite CPI